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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/575,349	05/19/2000	Michael J. D'Elia	AMDA 474PA	1541

7590

07/16/2002

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EXAMINER

PERALTA, GINETTE

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 07/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/575,349

Applicant(s)

D'ELIA ET AL

Examiner

Ginette Peralta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other.

DETAILED ACTION

*Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 18-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeng et al. (U. S. Pat. 5,710,073) in view of Bartholomew et al. (U. S. Pat. 6,143,080).

Jeng et al. teaches a method for forming a coating on a surface that comprises supplying a gas to a chamber, and using the supplied gas in combination with selected reactants and depositing a coating on the wafer, wherein the gas includes ammonia and dichlorosilane, wherein depositing a coating on the wafer includes depositing an anti-reflective coating (ARC) having uniform optical properties, wherein the ARC has a  $k$  value between 0.3 and 0.5, and the method further includes performing photolithography using the ARC.

Jeng et al. teaches all the limitations in the claims with the exception of controlling the introduction of the gases through a sensor or detector.

Bartholomew et al. teaches a method that comprises adjusting a gas injector in a CVD arrangement by providing at least one gas concentration detector in the CVD arrangement in the form of a sensor that measures the flow characteristics of at least one

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of the gases in the gas flow path (Col. 4, ll. 48-55), and in response, to the detected characteristic, the gas injector is adjusted, wherein the detector is removed from the CVD arrangement after detecting the concentration of the supplied gas.

Thus, it would have been obvious to one of ordinary skill in the art to use a CVD arrangement that would control the introduction of the gases according to the concentration or other characteristics of the gases for the disclosed intended purpose of Bartholomew et al. of controlling the reaction as the flow rate of gases affect the extent and uniformity of the deposition reaction.

#### *Response to Arguments*

3. Applicant's arguments filed 4/26/02 have been fully considered but they are not persuasive.

Regarding applicant's argument that the Office Action fails to explain how and where there is teaching that corresponds to the limitations concerning the depleted gas supply zone, it is noted that the claimed invention is directed to a method of forming a coating on a surface of the semiconductor wafer in a CVD arrangement wherein a gas injector is used to maintain a uniform supply of the gas in a zone of the CVD arrangement that would exhibit a depleted gas supply absent the injector, thus a depleted gas supply is not required in the method itself and furthermore Jeng et al. as modified by Bartholomew et al. teaches gas injector in a CVD arrangement that has a gas concentration detector and thus determines if there is a depleted gas supply zone and modifies the flow of the gases.

*Conclusion*

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ginette Peralta whose telephone number is (703)305-7722. The examiner can normally be reached on Monday to Friday 8:00 AM- 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on (703)306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7722 for regular communications and (703)308-7724 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

GP  
July 15, 2002

A handwritten signature in black ink, appearing to be "Elo", is written over a faint, illegible stamp.

STANDARD  
10/20/02